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~~UNIVERSAL NETWORK INTERFACE FOR HOME NETWORK~~

PLURAL INTERFACES IN HOME NETWORK WITH FIRST COMPONENT HAVING A FIRST
HOST BUS WIDTH AND SECOND COMPONENT HAVING SECOND BUS WIDTH

RELATED APPLICATIONS

This application claims priority from U.S. provisional patent application serial no. 60/520,591, filed November 17, 2003.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to home entertainment systems.

2. Description of the Related Art

Home entertainment networks have been provided that can include a set-top box media server that communicates with various components in the home, e.g., TVs, laptop computers, custom display devices, phones, and other electronic devices. Home network communication technologies (e.g., 802.11 wireless, UWB (Ultra Wide Band), PLC (Power Line Communication), etc.) are widely used as their costs decrease. As critically recognized herein, not all devices that may be desired to be placed on the network have the same internal hardware architecture and, hence, one network interface does not fit all. For example, an Ethernet card for a personal computer (PC) usually has a PCI interface and PCI ready, and the Ethernet card can be mounted to an expansion PCI slot in the PC to establish a network interface, while an inexpensive audio product, for example, a boom box, might use an inexpensive 8-bit micro-

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an audio ADC 42 and MPEG-encoded in the MPEG encoder 40, which, in accordance with principles known in the art, multiplexes the audio and video signals and outputs a multiplexed stream.

In accordance with present principles, the MPEG stream from the MPEG encoder 40 can be sent directly (through a line 43) to a PLC Interface 44, the details of which are described further below in reference to Figure 5. In addition or alternatively, the multiplexed output MPEG signal may be sent to the PLC Interface 44 through an internal host bus 46 that can be, for example, a PCI bus having a bus width of sixty four (64) bits. As shown in Figure 2, the PLC Interface 44 communicates with the power line 22 shown in Figure 1 through the server power plug 24. Other components of the server 12 are also connected as shown to the host bus 46.

Additionally, the server 12 may receive an analog cable signal at a cable terminal 48, and that analog cable signal can be tuned and demodulated in a tuner/frontend 48 in accordance with cable principles known in the art. A video output from tuner/frontend 48 can be digitized by a cable video ADC 50 and MPEG encoded in a cable MPEG encoder 52. Similarly, an audio output from the tuner/frontend 48 can be digitized by a cable audio ADC 54 and MPEG encoded in the cable MPEG encoder 52, the output stream from which is sent to the PLC Interface 44 directly and/or through the internal host bus 46.

Figure 2 shows that the processor 14 of the server 12 also communicates with the host bus 46. It is to be understood that the processor 14 controls the server 12 constituent parts and runs the control software program stored in a memory 56. If desired, an input device such as but not limited to a keypad 58 can be used to send input data to the processor 14 through the bus 46. An

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